

I- BACKGROUND OF THE INVENTION

FIELD OF INVENTION

The present ~~utility model~~^{invention} refers to a new modular container that can be ~~interconectable~~^{INTERCONNECTABLE} for multiple uses; and its ~~has~~^{is} for purpose to favor the conditions of ~~reutilization~~^{for reutilization} of containers, especially of the type manufactured for its later discard.

DESCRIPTION OF RELATED ART

As it is public and notorious, in the last decades the whole world has been flooded by products with containers that can be disposed of, which, although they facilitate its employment and they reduce derived operative costs of claim, (such as gathering, classification, cleaning, transport and storage, etc.) they constitute, on the other hand, one of the humanity's bigger ecological problems since, once used it is not known ^{what} ~~that~~ to do with them.

The problem is increased when such containers that, can be disposed of ^{are} ~~is~~ not structured in material bio-degradables; for that ^{reason} ~~that~~ its "it discards" truly it is not ~~but~~ the simple transfer of the containers ^{from one} ~~of a~~ place to other, without its ^{being degradable} ~~is degraded~~ it prevails.

Inside the wide variety of containers that can be disposed of - noⁿ degradables - that know each other, the plastic bottles are without a doubt ~~which~~ constitute the biggest volume, following them in order ^{are} the metallic cans. For that ^{reason} ~~that~~ to give an

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1 approximate idea of the quantity of containers that ~~they~~ are
2 discarded in the world, ^{it would} be enough to point out regarding the number
3 of cans that ~~so~~ alone in the Argentina, ^{that} they are thrown ^{out,} ^{APPROXIMATELY} 600 million
4 cans approximately per year. In the case ^{particular to} peculiar of the city
5 of Buenos Aires and the metropolitan area, during the year 1996
6 4,500,000 tons of garbage of the most diverse materials were
7 picked up; ^{having} being the plastics composing 15%, particularly low
8 for the form of containers.

9 ~~It is so~~ the final destination of the plastic bottles ^{at} it
10 finishes ^{is} being that of the ^{land fills} lands and dumps, as well as those
11 denominated "sanitary fillers", ^{which} ~~what~~ produces high proportion of
12 environmental contamination, obstructing pipes and mouths of
13 drainages and, mainly, forming true mantels or strata in all
14 type of land ^{fills} ~~fills~~ to which ^{do} not ^{ever} serve as material of
15 effective filler.

16 Three forms usually exist ^{when} of facing the problem of the
17 containers that can be disposed of (that are not bio-
18 degradables):

19 1 - the destruction of the containers:

- 20 • By means of the dive or crumbled mechanic: This process,
21 although it facilitates the reduction volumetric of the
22 containers, it doesn't modify the impossibility of
23 degradation of their material.

- By means of their burnt one: This process is maybe the fewer recommended of all, since the combustion of some plastic substances (I eat the PVC for example), it is highly polluting.
- By means of the action of chemo-destructive agents: it has been tried to eliminate containers gathering them in piletones where diverse chemical substances are overturned; but such processes neither have had acceptance, mainly due to the high operative costs, to their limited yield; to that, in certain measure, they are also pollutants (since they generate noxious vapors); and to the fact that in general, they usually produce anyway a residual material.

2 - the ^{reutilization} ~~reutilization~~ of the containers:

- This resource, although useful, is since an employee in a limited proportion, fundamentally, it depends on the contained product (for example, the ^{reutilization} ~~reutilization~~ of containers that can be disposed of is not allowed to contain nutritious neither medicinal products). Also, the packed original product contaminates anyway, to the new content, and it is not always possible ^{sanitize} ~~higienizar~~ the containers, particularly ^{i.e.} ~~I.e.~~ when they are of flimsy structure (~~I.e.~~ for example, those manufactured in processes of having blown).

3 - the one recycled of the material of the containers:

- This resource is also acceptable, because it constitutes a form of use of the container; but has several inconveniences: in the first place, because starting from its first use it is polluted with diverse substances -- inclusive which constituted its first content -- and that, to eliminate them, it required of relatively expensive processes; in second place, because the recycled plastic doesn't conserve the properties of the matter it prevails original and, therefore, it ^{pe} presents diverse practical inconveniences, such as the premature aging, a bigger fragility, a poor presentation in reason of combining the pigmentations, etc.

For everything it, alone a minimum proportion of plastic bottles ends up being ^{reutilized} ~~reutilizada~~, or recycled.

The pattern of utility that is described in the present documentation, constitutes an ingenious resource that facilitates the ^{reutilization} ~~reutilización~~ of containers that can be disposed of -- ^{types} ~~tales~~ like plastic bottles -- with a different utilitarian end.

SUMMARY OF THE INVENTION

In essence, it is to produce a new type of container provided ^{discordable} ~~descartable~~ -- ^{so much} ~~tanto~~ in their lateral walls as in their bolster and bottom -- ^a ~~of~~ means of reciprocal interconnection with other containers of the same characteristics; so that, instead of

1 throwing them, you stimulate the accumulation of the empty
2 containers to compose structures of all type and application,
3 such as recreational, functional, ornamental, etc.

4 This way, for example, in the constructive aspect the bottles
5 ~~enchainables~~ ^{enchain} in ^{the} form of ^{block} block's modulares can constitute an
6 interesting solution to the problem of the housing. So that the
7 blocks transparent holes conform panels, or it leaves ^{off} ~~of~~ the
8 same ones that facilitate the step from the light to their
9 inclination, cooperating to the environmental natural
10 illumination as well as to the energy saving.

11 Also, in such an application, if ^{or} to the component modular blocks
12 of each container ^{reutilized} ~~reutilizado~~ leaves them ^{empty} ~~to him this way~~ holes,
13 (containing only air) they constitute a water heater-insulating
14 structure; while if you ^{then} ~~the~~ padded one with sand, earth or
15 another material pulverulent or to granulate appropriate, this
16 confers them a bigger inertia and, in the event of being used a
17 dark material, they can also retain the heat of the solar rays
18 to offer bigger comfort to the housing during the night.

19 Similarly, the new containers can be interconnected to form
20 composition games -- ^{recreational} ~~recreatives~~ or didactic --, circumstance
21 ^{are changable} ~~is rateable~~ to give opportunity to the children and young
22 to develop the genius, and to contribute to the use non
23 pollutant of their environment.

1 It is foreseen that the connections can be carried out forming
2 structures so much right as gulches, undulant, arched and, even
3 ring segmented.

4 ^{The} ~~He~~ couples among each two serial bottles for their extreme
5 bolster and for their bottom, you can carry out with the neck
6 threaded with or without their placed cover; including, also,
7 statements couple, means of retentive rim that prevent that the
8 modular elements is disconnected spontaneously.

9 In fact, the new system is ^{capable} ~~able~~ of being applied in everything
10 that ~~that~~ ^{to} the imagination is able to conceive, returning ~~the~~ man
11 ^{his} ~~its~~ capacity lúdica, when allowing him to apply ^{his} ~~its~~ genius in
12 the conception of the most diverse structures and
13 configurations, and to take them to the practice ^{within his} ~~with its~~ own
14 hands, to transform containers that can be disposed of in
15 utilitarian and aesthetic systems. That is to say, to make of
16 the useless and harmful, an innovative and useful employment.

17

18 **II - Illustration**

BRIEF DESCRIPTION OF THE DRAWINGS

19 For ^{greater} ~~bigger~~ clarity and understanding of the pattern of utility,
20 it illustrates it to him with several figures in which it has
21 been represented in one ^{of} ~~in~~ their ways I ^{refer} ~~preferred~~ you give ~~of~~
22 ~~realization~~ ^{to} ~~everything~~ ^{the} ~~to~~ simple title of illustrative example,

1 not limitative in which the suitable figures with oneself ^{later} ~~letter~~
2 corresponds oneself realization type; being::
3 Figure 1-A a view in perspective of the modular container that
4 can be ^{INTERCONNECTABLE} ~~interconectable~~ in which the means of male embedding and
5 female are incoming and salient in a cylindrical way. You can
6 appreciate that the same ones are prepared in the lateral faces
7 and guided in the longitudinal sense of the container.
8 Figure 2-A, it is a traverse cut of the container in perspective
9 that allows ^{one} / to appreciate clearly like they ^{appear} ~~prepare~~ and the
10 mentioned means are conformed of ^{coupling} ~~it couples~~ male-female starting
11 from the respective walls.
12 Figure 3-A, it is a schematic view in traverse court of two
13 containers in bottle form ^{which} ~~with~~ you couple circular male-female,
14 indicating like the lateral connection takes place according to
15 the arrow.
16 Figure 4-A, it is lengthwise a view in perspective of the cut
17 container in two, and observed from their bottom or base, to
18 show the conformation of the same one, of it couples compatible
19 with the neck, with or without their cover.
20 Figure 5-A, they are two containers cut lengthwise and
21 represented in perspective to show the way in ^{which} ~~that~~ the extreme
22 interconnection of the bottles takes place according to the
23 present invention.

1 Figure 6-A, a view in perspective of two containers in
2 circumstances of being interconnected by their ends (bolster and
3 bottom) of it couples reciprocal.

4 Figure 7-A, a longitudinal cut in perspective of two containers
5 ^{as} which shows the figure 4-A, already interconnected by the
6 reciprocal rim of the wall bolster and neck of one in the cavity
7 of the bottom of the other one.

8 Figure 8-A, is a form of connection of the container according
9 to the realization of the figure 1-A that shows ^{to} three
10 interconnected bottles: two of them ^{co-linear} ~~colinealmente~~ for its ends
11 ^{are} ~~of it~~ couples -- ^{bolster} ~~cabeza~~ and bottom -- and the third, forming
12 90° with those.

13 Figure 9-A, is another form of connection of the container
14 according to the realization of the figure 1-A that shows to two
15 containers connected in cross.

16 Figure 10-A, is another form of connection of the container
17 according to the realization of the figure 1-A that shows
18 superimposed lines of containers interconnected laterally by its
19 ends and for two of its opposed lateral walls, forming a wall.

20 Figure 11-A, is a variant of connection of the containers
21 according to the realization of the figure 10-A that shows ^{to}
22 like two walls can be connected ^{and} formed by containers and
23 concurrent to an area ^{igual area} ~~esquina~~.

1 Figure 12-A, it is a schematic detail in traverse court and it
2 climbs increased of a game of means of joining reciprocal male-
3 female between two pack modulares; this increased detail of the
4 profile of the adornments of reciprocal rim, it shows the
5 formation of grooves or grooves dedicated on one hand of
6 cooperating to the security of the connection, and for another
7 to allow the exit of the air ^{trapped} ~~occluded~~ in the female cavity.

8 It is a lateral view of a container in which the lateral
9 interconnection means are rectangular and they are guided in the
10 traverse sense of this container.

11 Figure 13-B, it is a view of a bottle according to the present
12 invention, but with their means of conformed embedding and
13 willing according to a new realization form in which the same
14 ones consist in incoming and salient right and rectangular that,
15 alternately, they extend to all the long of the lateral walls of
16 the same container; being the means of it couples prepared
17 bolster and conformed in an identical way to the figures 1
18 through 12-A.

19 Figure 14-B, a schematic traverse cut of a plurality of
20 containers conformed according to the realization 13-A showing
21 the way in that the lateral interconnection can take place with
22 the mentioned means.

23 Figure 15-C, shows a perspective of the bottle according to the
24 reference invention in a new realization form in the one that

1 the incoming and salient lateral of interconnection, they are
2 right and they prepare transversely.

3 Figure 16-C, a perspective of two bottles according to the
4 realization of the figure 15-C, showing the way in that the
5 mechanical connection takes place among the same ones by means
6 of you couple them traverse right.

7 Figure 17-C, a schematic view in elevation of different bottles
8 interconnected with union, and according to the realization of
9 the figures 15 and 16-C.

10 Figure 18-D, another realization form that, maintaining the
11 basic concepts of you couple them bottom ~~cabeza~~^{and bolster} ~~y~~, as well as
12 the means of it couples lateral, in this case it presents the
13 particularity that this means of it couples lateral they consist
14 on alternate right projections with incoming right, of
15 connection male-female, but that they are guided sidelong with
16 regard to the longitudinal geometric axis of each lateral wall.

17 Figure 19-E, a view in perspective of the container, in which
18 has modified its format since, instead of the cylindrical or
19 prismatic form is, in this case, of section traverse ~~trapezoidal~~^{trapezoidal}.

20 Figure 20-E, a view of the realization 19-E of the container,
21 shown in perspective from their wall bolster, to observe like it
22 can lean on for one of their faces, for example, the base bigger
23 than the configuration sectional ~~trapezoidal~~^{trapezoidal} that particularizes
24 it.

1 Figure 21-E, a view of several containers of section traverse
2 ~~trapezoidal~~ ^{trapezoidal}, interconnected by the lateral means of it couples
3 according to the invention, forming an undulant body.
4 Page 22-E, a variant of application of the containers connected
5 ~~trapezoidal~~ ^{trapezoidal} forming an arch.
6 Figure 23-E, another variant of application of the containers
7 connected ~~trapezoidal~~ ^{trapezoidal} forming a body of right segments.
8 The fig. 24-E, another variant of application of the containers
9 connected ~~trapezoidal~~ ^{trapezoidal} forming a direct structure.
10 Figure 25, a detail ~~in court~~ ^{account as} and it climbs increased in relation
11 to that of the previous figures that shows the way in ~~that~~ ^{which} the
12 one takes place it couples longitudinal between two ~~you pack~~ ^{apex}
13 characteristic -- ~~de-equal~~ ^{they} -- by means of the entrance of the
14 neck -- sin the cover that is shown here in lines of points --
15 of one of the containers in the depression or couple female
16 bolster formed in the external cavity of the bottom of the other
17 container; also, in this figure it is observed with clarity ~~like~~ ^{that}
18 the ring cord in tooth form, starting from which the neck of the
19 container is born, puts on shoes retentively in a compatible
20 ring groove provided by the female cavity of the other
21 container, to assure the retention ~~posicional~~ ^{positional} of the one it
22 couples.

1 Figure 26, a detail of the neck of a container, without their
2 cover, indicating like it is calzable the ring cord in the
3 compatible groove of the other container; and finally,

4 Figure 27, the same detail of the figure 27 that shows to a
5 container with the cover begun in the compatible cavity of the
6 other and begun posicionalmente by the reciprocal rim of the
7 cord and ring groove of this containers.

8 In the different figures, the same reference numbers indicate
9 same or corresponding parts, and they have been pointed out with
10 the letters the groups of several elements.

11 Listing of the main references:

- 12 (a) means of lateral interconnection of the bottles
- 13 (b) means of interconnection bolster of the bottles
- 14 (1) lateral walls (they are which provide the means)
- 15 (1') smaller lateral wall of base (in the realization
- 16 of container trapecial, figures 19 at 24)
- 17 (1'') lateral walls (in the realization of container
- 18 trapecial, figures 19 at 24)
- 19 (2) embeddings lateral male (salient)
- 20 (2') embeddings lateral female (recesses)
- 21 (3) bottom
- 22 (4) wall bolster
- 23 (4') cavity of the bottom (3) for the interconnection
- 24 bolster

(5) neck of (4), (it acts as connector male bolster
(5') couple female bolster in the bottom (3)
(6) it covers
(7) ring cord in tooth form, from birth of the neck
(5)
(7') groove ring memory of (7)

~~III - Main Object~~

DETAILED DESCRIPTION OF THE INVENTION

To the specified ends, the new modular container that can be
~~interconnectable~~^{INTERCONNECTABLE}, for multiple uses, it is of the type that,
conforming a bottle or the similar thing, -- ~~de~~^{the} structures and
materials usually developed for its it discards --, essentially
understands a bottom (3) and lateral walls (1) finished in a
wall bolster (4); and this wall bolster (4), is prolonged in a
neck (5) ~~delimitante~~^{the limitation} of an access mouth to its interior,
~~errable~~^{shuttable} by means of a cover (6) of it removes and put;
characterized because so much the lateral walls (1) as those of
bottom (3) and bolster (4), they possess means of lateral
interconnection (to) and bolster with other containers (TO) of
the same characteristics.

IV ^e Description ^e

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2
3
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5 In general terms, and ^{ie,} ~~I eat~~ was already early ^{described}, the invention
6 refers to a container that essentially can conform a bottle
7 plastic or similar ^{material,} whose structure and materials have been
8 usually developed for its ~~it~~ discards, after the use of its
9 content ^{, to other uses}. This type of bottles essentially understands a bottom
10 (3) in the one that you/they have its birth the lateral walls
11 (1) finished in a wall bolster (4) that can be plane, or forming
12 arched shoulders, in form of cone trunk, etc.; being prolonged
13 the same one in a neck (5) that, in form of tubular mouthpiece,
14 it defines an access mouth to the interior of the bottle,
15 ~~shuttable~~ ^{shuttable} by means of a cover (6) ^{that can be removed} ~~of it removes~~ and put ^{back on} ~~(that~~
16 ~~puts on, shoes to thread, to pressure, etc.~~ ^{with engaging threads and application of} ~~pressure, etc.~~

17 In the case of the present invention, the bottle, to modulate
18 ^{INTERCONNECTABLE} ~~interconnectable~~ possesses interconnection means ^{to interconnect} (to) ~~and~~ with
19 ^{that have lateral walls and the bottom and top} ~~other containers of the same characteristics.~~ surfaces with means
20 for lateral and ~~top and bottom~~ interconnection.
21 The interconnection means (to) they prepare in lateral walls
22 (1), while the they make it ^{combinable} ~~combinadamente~~ ^{at} in their bottom (3)
23 and in their wall bolster (4). This way, so much the lateral
24 walls (1) as the head and the bottom of each container they
25 possess means of lateral interconnection (to), and bolster. (To
see figures 1-A, 4-A, 13-B, 15-C, 18-D); what allows to this

1 type of container -- ^{and the} ~~und time~~ holes -- ^{reutilizable} ~~reutilizarse~~ with
2 recreational, didactic, functional ends, etc. by means of
3 reciprocal joinings (^{i.e.} ~~I eat~~ for example, which illustrate the
4 figures 3-A, 5-A, 6-A, 7-A, 8-A, 9-A, 1-A, 11-A, 12-A, 14-B,
5 16-C, 21-E, 22-E, 23-E, and 24-A in a non limitative way).
6 Essentially, the means of lateral interconnection (to) they
7 ^{include compatible recesses} ~~consist in incoming~~ and salient conformed in the lateral walls
8 (1) of the bottle like means of embedding lateral male ^(salient) (2) and
9 female ^(recesses) (2') that are compatible to each other. In a favorite
10 form of realization the mentioned embeddings lateral male (2)
11 they are constituted for salient cylindrical that constitute
12 bellboys of it couples compatible with the embeddings lateral
13 female (2') that are incoming or equally cylindrical cavities ^{/recesses}.
14 These means of lateral interconnection (to) they prepare in the
15 lateral walls (1) guided in the longitudinal sense of the
16 bottle, and aligned on oneself axis and so that the lateral wall
17 (1) opposed they have different embeddings (2) and (2'). This
18 way while a lateral wall (1) has embeddings lateral male (2),
19 the lateral wall (1) opposed -- ~~to~~, in their case, the adjacent
20 one -- it possesses embeddings lateral female (2'). (To see
21 series of figures ~~to~~).
22 The employment of means of lateral female male couples (b) in a
23 cylindrical way, besides simplifying the connection, has the
24 advantage of facilitating the relative rotation among pieces

1 connected by an only game of means (2)-(2'), if it was required
2 it (it figures 9-A). But, equally, the salient ones in form of
3 bellboys (2), it can be polygonal just as hexagonal, pentagonal,
4 etc.; should be of same compatible format the means of it
5 couples female (2').

6 In other realization forms the means of lateral interconnection
7 (to) among bottles they can be constituted by embeddings lateral
8 male (2) and female (2') of different conformation. This way,
9 the same ones (2)-(2') they can be ^{straight recesses} ~~incoming~~ and salient ^{alternative nerves} ~~right~~
10 and alternate of configuration rectangular ^{parallelepiped} ~~parallelepipedica~~,
11 willing alternately in each lateral wall (1), like one observes
12 in the series of figures of the realizations ^{13 14B, 15B, 16C, 17C and 18D} ~~B, C and D~~. Also
13 in different realization forms, these lateral embeddings (2)
14 (2') they can be guided so much in the longitudinal sense of the
15 bottle (you figure 13-B and their form of connection 14-B), like
16 in the traverse sense (you figure 15 at 17-C); and even oblique
17 (it figures 18-D).

18 Preferably, the lateral faces -- destinadas to enter in
19 reciprocal contact in the salient ones (2) and ^{recesses} ~~incoming~~ (2') --
20 they have a design ranurado or grooved (like it is schematized
21 in the cut of the figure 12-A), with the purpose of offering a
22 bigger ^{RETENTION} ~~retention~~ of it couples and to facilitate the exit of the
23 air (since, ^{it} ~~of~~ being this ^{trapped} ~~occluded~~, ^{air} ~~the~~ pressure would spread
24 to produce the spontaneous ^{decoupling} ~~desacople~~.

1 With regard to the means (b) of extreme interconnection between
2 the bolster of a bottle and the bottom of another of the same
3 type, they are which show the figures ^A4, ^A5, ^A7, ^B13, 25, 26 and
4 ²⁷28. In general, the same ones consist on a salient one by way
5 of male, -- conformada it couples for the wall bolster (4) of
6 the bottle --, compatible with an incoming one that defines the
7 external face of the bottom (3) of the bottle
8 Plus particularly, the wall bolster (4) of the bottle that
9 conforms the shoulders of the same one (planes, arched, conical,
10 etc.), toward the extremity proximal of the same container it
11 reduces their traverse section gradually, to finish in the neck
12 (5) that can be threaded or with projections to allow the rim of
13 a cover (6) of it ^{to be removed} ~~removes~~ and put ^{back} ~~Concordantemente~~ ^{Correspondingly}, the bottom
14 wall (3), by way of half of female connection with the wall
15 bolster (4) and their neck (5), it conforms a concavity (4') of
16 size and compatible format with the mentioned shoulders, also
17 including a compatible central depression with the neck (5) of
18 the bottle; being able to produce the one couples of the
19 mentioned neck (5) in direct form, (^{you} ~~you~~ figure 25 and 26), or
20 still providing their cover (6), ⁱⁿ ~~it~~ figures 27.
21 It is of highlighting that, preferably, it has been foreseen
22 that the neck (5) of the bottle, be born or possess a salient
23 one or ring cord (7) projected from the periphery of this

1 container and finished in form of ring tooth (~~you~~^{see} figure 25 at
2 27).

3 This projection can be of the type that usually certain
4 container type has to hold the bottles, as resistant handle
5 (since the necks are usually relatively short); undoubtedly in
6 this case takes advantage it to put ^{it} ~~on shoes~~ in a ring groove ^{memory}
7 (7') that -- compatible in format and disposition with the
8 mentioned cord (7) -- during the one it couples that it is
9 ^{INDICATED: a} ~~indicated~~ in the figures 25 and ^{and} 27, this groove works as
10 retentive rim of the one it couples ^{with and} avoiding that the component
11 parts ^{will} ~~are~~ come out, unless it ^{is forced in} ~~forces it~~ to it.

12 In agreement with the mentioned forms, the cavity (4') of the
13 bottom wall (3) it can be concave rounded, or infundibuliforme
14 ^{in the form of a cone trunk including a central depression}
15 ^{with a concave portion. In this last case the concave portion}
16 ^{compatible with a neck of another bottle of similar characteristics}
17 ^{and an annular groove.}
18 can have trunk-conical form, in a case, or trunk-pyramidal in
19 another. In all the cases the concave portion is provided of a
20 compatible central depression with the neck (5) of the bottle.

21 In another realization form the cavity (4 ') of the bottom (3)
22 concave it conforms an it couples female bolster (5') that is in
23 size and compatible way with the neck (5) of the bottle, without
24 their cover (6). This couples (5') can have nerves or internal
25 projections that define a lightly smaller interior diameter to
26 the exterior of this neck (5), so that the interconnection male-
27 female among the mentioned neck (5) of a bottle, and the one

1 couples (5') of the cavity (4') power station provided by the
2 bottom (3) of another bottle, ~~it~~ ^{through} is able to take place ^{for}
3 forced rim to pressure.

4 In synthesis the union of the bottles modulares ^{INTERCONNECTABLES} ~~interconectables~~
5 by means of their respective embeddings lateral males (2) and
6 females (2'), as well as by means of their necks (5) and couple
7 bolsters (5') it allows the constitution of groups in diverse
8 ways and applications, from devices lúdicos until structural
9 groups as walls. (such as which, to simple title of illustrative
10 example, not limitative, they show the figures 3-A, 5-A, 6-A,
11 7-A, 8-A, 9-A, 1-A, 11-A, 12-A, 14-B, 16-C, 21-E, 22-E, 23-E,
12 and 24-A).

13 In what concerns to the format of the container in if, this can
14 be cylindrical, prismatic square, ^{regular} ~~prismatic square~~ ^{ochavado,}
15 prismatic hexagonal (to allow constructions to "bee honeycomb") ^{and irregular} ~~prism~~
16 etc.; although always maintaining the principle of the lateral
17 joining means and ends that it constitutes the essence of the
18 invention.

19 Another in the ways possible of realization of this format --
20 ^{co-advantageous} ~~coadyuvante~~ to favor the ^{reutilization} ~~reutilización~~ of the bottles up to now
21 ^{discartables} ~~descartables~~ -- it is the one of giving to the same ones a
22 format of section traverse ^{trapezoidal} ~~trapezoidal~~ (that illustrate the
23 figures 19-E, 20-E, 21-E, 22-E, 23-E and 24-E), defined by the
24 biggest base(1), the minor(1') and the sides(1").

1 With this form, according to the position in that the sides are
2 coupled (1") of the connected bottles, it is ^{able} to obtain
3 undulant conformations as that of the figure 21-E, segmented as
4 in the figure 23-E, in arch like in 22-E ^{half like form} ~~or clock~~ ~~that~~, completed
5 it can define a complete circle; straight line as in the figure
6 24-E; etc.

7 In all the cases, the bottles this way connected, anyone is
8 their form and the type of the used joining means, it allows to
9 build walls or hollow, insulating structures, or you stuff with
10 such diverse materials as earth, sand, etc.

11 It is certain that to the being the present invention taken to
12 the practice, they will be able to be introduced modifications
13 that that to certain construction details and is formed refers,
14 without it implies it to move away from the fundamental
15 principles that you substancian clearly in the clauses
16 reivindicatorias that continue next.

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18 They follow the claims:
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~~V - Claims~~

WHAT IS CLAIMED IS:

~~There being this way especially descripto and certain the nature
of the pre sat down utility model, and how it can be taken to
the practice, it is declared, to claim, as of exclusive right
and property?~~

1. A plurality of modular containers that can be interconnected, for multiple uses, each said container comprising:

a bottom surface, a top surface, and lateral walls that are joined to one another via the bottom surface and the top surface; and said top surface having a prolonged neck delimiting an access mouth to an interior of said container, said access mouth being shutable using a cover that can be removed; wherein the lateral walls and the bottom and top surfaces possess means for lateral and top and bottom interconnection with others of the plurality of modular containers, wherein the means for interconnection include compatible recesses and salients and of reciprocal fit through initial, but not continuous, pressure.

2. A plurality of modular containers that can be interconnected, in accordance with claim 1, wherein the means for lateral interconnection are recesses and salients conformed in the lateral walls of the container as male-female engaging means, compatible to each other and disposed along said walls.

1 3. A plurality of modular containers that can be
2 interconnected, in accordance with claim 2, wherein the means
3 for lateral interconnection are guided in the longitudinal sense
4 of the container.

5 4. A plurality of modular containers that can be
6 interconnected, in accordance with claim 2, wherein the means
7 for lateral interconnection are guided in the traverse sense of
8 the container.

9 5. A plurality of modular containers that can be
10 interconnected, in accordance with claim 2, wherein the means
11 for lateral interconnection are guided at an angle with regard
12 to the longitudinal geometric axis of the container.

13 6. A plurality of modular containers that can be
14 interconnected, in accordance with claim 2, wherein the means
15 for lateral interconnection are alternate recesses and salients
16 compatible to each other that constitute male-female engaging
17 means with the equivalent recesses and salients provided by the
18 lateral walls of other containers similar to those with which
19 they are laterally connectable.

20 7. A plurality of modular containers that can be
21 interconnected, in accordance with claim 2, wherein the means
22 for top interconnection includes a salient conformed in the top
23 surface of the container, compatible with recesses conforming in
24 the bottom surface an external cavity, as male-female engaging

1 means among said top surface of each container with regard to
2 said cavity of the bottom surface of another similar container.

3 8. A plurality of modular containers that can be
4 interconnected, in accordance with claim 2, wherein the
5 compatible salients and their recesses are circular.

6 9. A plurality of modular containers that can be
7 interconnected, for multiple uses in accordance with claim 2,
8 wherein the compatible salients and their recesses are alternate
9 nerves with straight recesses.

10 10. A plurality of modular containers that can be
11 interconnected, for multiple uses in accordance with claim 7,
12 wherein the means for top interconnection of a container with
13 the cavity and central depression in the bottom of another
14 container of similar characteristics includes a neck born in the
15 top shoulder of the container, starting from a surrounding cord
16 that is projected to form an annular tooth of retention against
17 an annular groove, compatibly provided by the cavity of the
18 bottom surface.

19 11. A plurality of modular containers that can be
20 interconnected, for multiple uses in accordance with claim 7,
21 wherein the top surface of the container, conforming shoulders
22 on the top surface toward a proximal extremity gradually reduces
23 its traverse section, ending the formation of the neck; while,
24 the bottom surface as a female connection means with the top and

1 its neck includes a cavity of size and format compatible with
2 the shoulders and that includes a central depression compatible
3 with the admission of the neck of another container of similar
4 characteristics.

5 12. A plurality of modular containers that can be
6 interconnected, for multiple uses in accordance with claim 11,
7 wherein the shoulders are rounded convex.

8 13. A plurality of modular containers that can be
9 interconnected, for multiple uses in accordance with claim 11,
10 wherein the shoulders are in the form of a cone trunk whose
11 smaller base is prolonged conforming the neck of the bottle.

12 14. A plurality of modular containers that can be
13 interconnected, for multiple uses in accordance with claim 7,
14 wherein shoulders on the top surface are in trunk-pyramidal
15 shape whose smaller base is prolonged conforming the neck of the
16 container.

17 15. A plurality of modular containers that can be
18 interconnected, for multiple uses in accordance with claim 10,
19 wherein the external cavity of the bottom surface is rounded
20 concave, and includes a central depression compatible with the
21 neck of the container; and an adjacency area among the central
22 depression and said cavity of the bottom surface, and which
23 includes an annular groove compatible with an annular cord of the
24 neck.

1 16. A plurality of modular containers that can be
2 interconnected, for multiple uses in accordance with claim 9,
3 wherein the cavity of the bottom surface is infundibuliform with
4 a concave portion in the form of a cone trunk including a
5 central depression compatible with a neck of another bottle of
6 similar characteristics and an annular groove, in turn
7 compatible to a retentive fit of an annular cord of the outer
8 compatible bottle which is connectable to the same.

9 17. A plurality of modular containers that can be
10 interconnected, for multiple uses in accordance with claim 9,
11 wherein the cavity of the bottom surface is infundibuliform,
12 including a concave portion in a concave trunk-pyramidal shape,
13 provided of a central depression compatible with the neck of the
14 bottle.

15 18. A plurality of modular containers that can be
16 interconnected, for multiple uses in accordance with claim 9,
17 wherein the central depression of the concave bottom is in size
18 and shape compatible with that of the neck and an annular cord
19 of the container and its cover.

20 19. A plurality of modular containers that can be
21 interconnected, for multiple uses in accordance with claim 15,
22 wherein the central depression of the concave bottom is in size
23 and shape compatible with that of the neck and an annular cord
24 of the container lacking its cover.

1 20. A plurality of modular containers that can be
2 interconnected, for multiple uses in accordance with claim 19,
3 wherein said central cavity of the concave bottom is inwardly
4 provided with a threaded portion compatible with a threaded
5 portion of the neck of the bottle.

6 21. A plurality of modular containers that can be
7 interconnected, for multiple uses in accordance with claim 19,
8 wherein the central cavity of the concave bottom is in size and
9 shape compatible with that of the neck of the container without
10 its cover, although with a slightly smaller interior diameter to
11 the exterior of said neck; so that the male-female
12 interconnection among the mentioned neck of a bottle, and the
13 central cavity provided by the bottom of another bottle is able
14 to take place by a forced fit through initial, but not
15 continuous, pressure.

16 22. A plurality of modular containers that can be
17 interconnected, for multiple uses in accordance with claim 19,
18 wherein the central depression of the concave bottom is in size
19 and shape compatible with that of the neck of the bottle without
20 its cover, although provided of nerves that an interior diameter
21 slightly reduced respecting the exterior of said neck; so that a
22 male-female interconnection among the neck of a container and
23 the central depression provided by the bottom of another

1 container is able to take place due to a forced fit by initial,
2 but not continuous pressure.

3 23. A plurality of modular containers that can be
4 interconnected, for multiple uses in accordance with claim 2,
5 wherein a central cavity of a concave bottom surface is in size
6 and shape compatible with that of the neck of the bottle without
7 its cover, although provided of nerves that reduce its interior
8 diameter with regard to an external diameter of said cover; so
9 that a male-female interconnection among the neck and cover of
10 the container and the central cavity provided in the bottom
11 surface of another container is able to take place due to a
12 forced fit by initial, but not continuous pressure.

13 24. A plurality of modular containers that can be
14 interconnected, for multiple uses in accordance with claim 1,
15 wherein a traverse section of the container is square and is
16 defined by the lateral walls provided of the interconnection
17 means with other bottles of similar characteristics.

18 25. A plurality of modular containers that can be
19 interconnected, for multiple uses in accordance with claim 1,
20 wherein the lateral walls of the bottle correspond to a prism.

21 26. A plurality of modular containers that can be
22 interconnected, for multiple uses in accordance with claim 1,
23 wherein the lateral walls of the container correspond to a
24 regular prism.

1 27. A plurality of modular containers that can be
2 interconnected, for multiple uses in accordance with claim 1,
3 wherein the lateral walls of the bottle correspond to an
4 irregular prism.

5 28. A plurality of modular containers that can be
6 interconnected, for multiple uses in accordance with claim 1,
7 wherein the lateral walls of the bottle correspond to a prism
8 having a square base.

9 29. A plurality of modular containers that can be
10 interconnected, for multiple uses in accordance with claim 1,
11 wherein the lateral walls of the container correspond to a prism
12 having a square base in an octagonal shape. (that is its corners
13 slanted)

14 30. A plurality of modular containers that can be
15 interconnected, for multiple uses in accordance with claim 1,
16 wherein the lateral walls of the container correspond to a prism
17 having an octagonal base.

18 31. A plurality of modular containers that can be
19 interconnected, for multiple uses in accordance with claim 1,
20 wherein the lateral walls of the container correspond to a prism
21 having a trapeziform base.

22 32. A plurality of modular containers that can be
23 interconnected, for multiple uses in accordance with claim 1,

- 1 wherein the lateral walls of the container correspond to a prism
- 2 having a circular base.

ABSTRACT

1
2 Modular containers that can be interconnected, for multiple
3 uses, of the type that, forming a bottle or similar thing, of
4 structure and materials usually developed for their disposal,
5 essentially includes a bottom and lateral walls finished in a to
6 wall. This top wall is prolonged in a neck delimiting an access
7 mouth to an interior or the container that can be shut by means
8 of a cover that is removable. The lateral walls, as do those of
9 the bottom and top, possess means of lateral and top
10 interconnection with other containers of similar
11 characteristics, including compatible recesses and salients and
12 of reciprocal fit through initial, but not continuous pressure.